Adam Fenjiro
9/27/23
CS3425 Lab 1 Report

Questions (total of 20)

1. Open query editor (no report needed)

2. Create student table

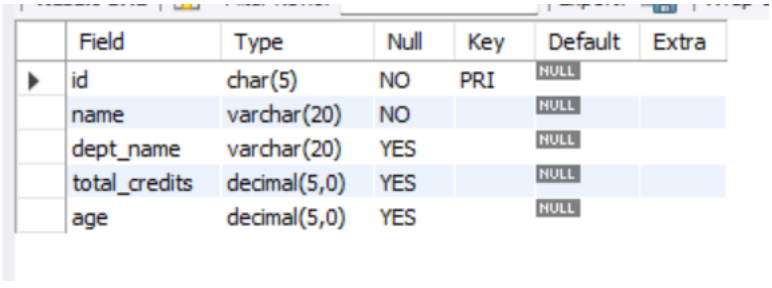
```
CREATE TABLE student(
        id char(5) primary key,
        name varchar(20) not null,
        dept_name varchar(20),
        total_credits numeric(5)
);
```

3. Modify student table

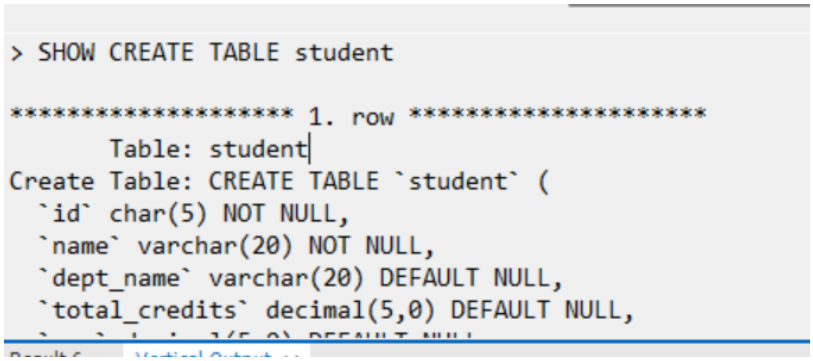
```
ALTER TABLE student
ADD age numeric(5);
```

4. Check student table

```
DESCRIBE student;
SHOW CREATE TABLE student;
```



Field	Type	Null	Key	Default	Extra
id	char(5)	NO	PRI	NULL	
name	varchar(20)	NO		NULL	
dept_name	varchar(20)	YES		NULL	
total_credits	decimal(5,0)	YES		NULL	
age	decimal(5,0)	YES		NULL	



```
> SHOW CREATE TABLE student

*************************** 1. row ***************************
       Table: student
Create Table: CREATE TABLE `student` (
  `id` char(5) NOT NULL,
  `name` varchar(20) NOT NULL,
  `dept_name` varchar(20) DEFAULT NULL,
  `total_credits` decimal(5,0) DEFAULT NULL,
```

5. Insert data

```
INSERT INTO student (id, name, dept_name, total_credits, age)
VALUES (1, "Adam", "CS", 18, 20);

INSERT INTO student (id, name, dept_name, total_credits, age)
VALUES (2, "Kyle", "CS", 16, 20);

INSERT INTO student (id, name, dept_name, total_credits, age)
VALUES (3, "Niko", "ACC", 15, 21);

INSERT INTO student (id, name, dept_name, total_credits, age)
VALUES (4, "Rick", "CS", 18, 21);

INSERT INTO student (id, name, dept_name, total_credits)
VALUES (5, "Rish", "BIO", 14, 21);
```

id	name	dept_name	total_credits	age
1	Adam	CS	18	20
2	Kyle	CS	16	20
3	Niko	ACC	15	21
4	Rick	CS	18	21
5	Rish	BIO	14	21
NULL	NULL	NULL	NULL	

6. Query data

```
SELECT * FROM student;
SELECT id, name FROM student;
SELECT * FROM student WHERE total_credits > 18;
SELECT * FROM student WHERE id > 18 AND dept_name = "CS";
```

7. Primary key violation

```
INSERT INTO student (id, name, dept_name, total_credits)
VALUES (5, "Someone", "PHY", 16, 22);
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
84	15:03:41	SHOW CREATE TABLE student	1 row(s) returned	0.000 sec / 0.000 sec
85	15:03:41	INSERT INTO student (id, name, dept_name, tota...	1 row(s) affected	0.000 sec
86	15:03:41	INSERT INTO student (id, name, dept_name, tota...	1 row(s) affected	0.015 sec
87	15:03:41	INSERT INTO student (id, name, dept_name, tota...	1 row(s) affected	0.000 sec
88	15:03:41	INSERT INTO student (id, name, dept_name, tota...	1 row(s) affected	0.016 sec
89	15:03:41	INSERT INTO student (id, name, dept_name, tota...	Error Code: 1136. Column count doesn't match val...	0.000 sec

8. Create department table

```
CREATE TABLE department(
        name varchar(20) primary key,
        location varchar(30),
        budget numeric(10)
);
```

9. Create Foreign key

```
ALTER TABLE student
ADD CONSTRAINT fk_dept_name
FOREIGN KEY (dept_name) references department(name);
```

10. FK violation

```
INSERT INTO student (id, name, dept_name, total_credits)
VALUES (1, "Adam", "CS", 18);
```

11. Delete data

```
DELETE FROM student WHERE id=4;
```

12. Update data

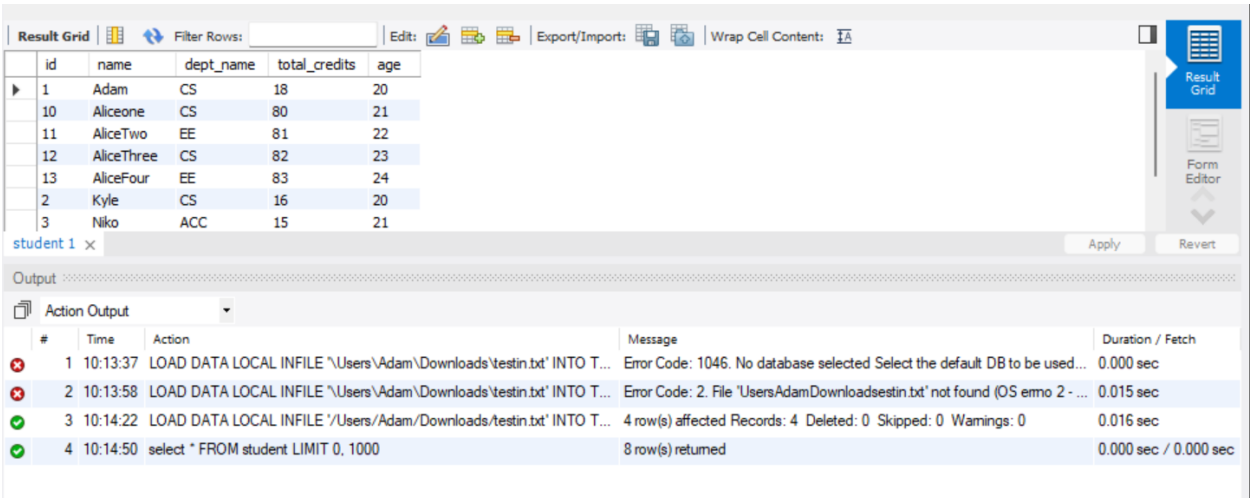
```
SELECT age from student WHERE id = 2;
UPDATE student SET age=21 WHERE id =2;
SELECT age FROM student WHERE id = 2;
```

13. Create data file

```
10      Aliceone        CS      80      21
11      AliceTwo        EE      81      22
12      AliceThree      CS      82      23
13      AliceFour       EE      83      24
```

14. Load data file

```
LOAD DATA LOCAL INFILE '/Users/Adam/Downloads/testin.txt' INTO TABLE student;
```



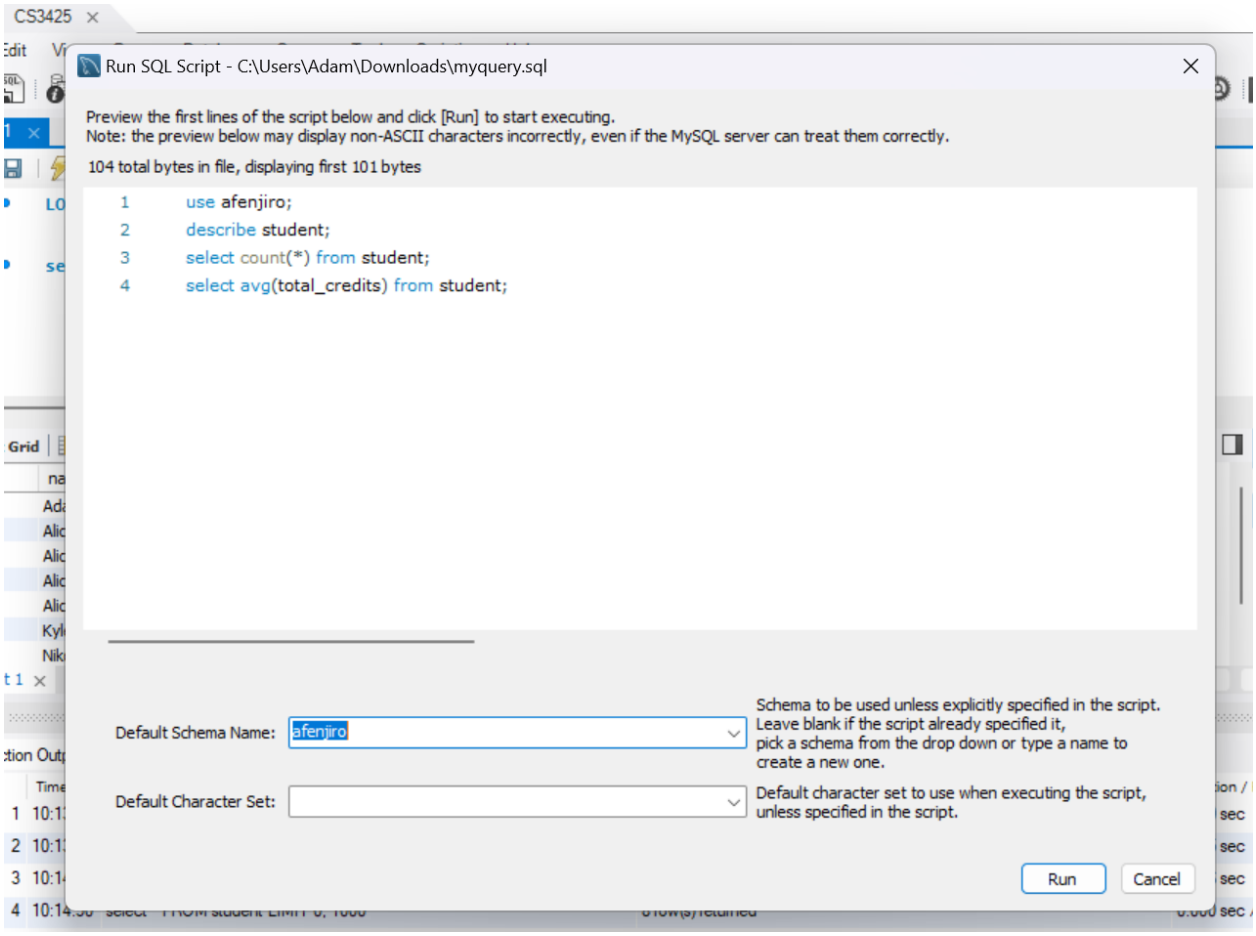
15. Create SQL script and Run batch job

a) MySQL interactive mode is a mode in which you run the MySQL client tool without specifying a script or file to execute.

b) MySQL batch mode is a mode in which you run the MySQL client tool with a script or file containing a series of SQL statements or commands.

c) To tell the MySQL command to read input from a file, we can use the < operator followed by the file path.
mysql -u username -p < script.sql

d) To save the output of a MySQL batch job to a file, we can use the > or >> operators to redirect the output to a file.
mysql -u username -p < script.sql > output.txt
or
mysql -u username -p < script.sql >> output.txt



✓	6	10:20:12	use afenjiro	0 row(s) affected	0.000 sec
✓	7	10:20:12	describe student	5 row(s) returned	0.000 sec / 0.000 sec
✓	8	10:20:12	select count(*) from student LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
✓	9	10:20:12	select avg(total_credits) from student LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec